

### **2003 University of Texas McCombs School of Business**

Confirmed the strong relationship between credit-based insurance scores and the likelihood of insured losses. It studied the relationship between credit history and insurance losses based on a database of more than 150,000 automobile insurance policies. The database of policyholders was divided into 10 equal sized groups according to credit scores. Researchers matched credit data with the corresponding claims data and found that those with the poorest credit scores generated relative losses much higher than those with the best scores. Those with the poorest credit scores generated an average incurred loss of \$918 per policy, 65 percent higher than those with the best credit scores that generated an average incurred loss of \$558.

### **2000 Casualty Actuarial Society Paper by James E. Monaghan, ACAS, MAAA**

Found a correlation between particular credit characteristics and loss ratios. The study used a series of credit characteristics that were combined into four distinct insured population groups. These four groups ranged from those policyholders with unacceptable credit rating to those with excellent credit ratings. The loss ratio performance for personal auto policyholders for those with the worst credit is 33 percent higher than the loss ratio for all policyholders combined. In contrast, those with the best credit generated a loss ratio 25 percent lower than the combined total.

### **1999 Virginia State Corporation Commission's Bureau of Insurance**

Concluded that because income or race are not found in credit scores, the practice is not a tool for redlining. The Bureau analyzed the relationship between credit scores and income and well as the relationship between credit scores and race. Since neither Fair Isaac nor Trans Union collects data on income or race, the Bureau obtained the information from the 1989 federal census.

### **1996 Tillinghast-Towers Perrin**

Found a 99 percent probability of a relationship between insurance scores and the likelihood of an individual filing an insurance claim. Tillinghast reviewed loss ratios relative to insurance scores for both auto and homeowners insurance. In eight of nine samples, the probability that a statistically significant correlation exists exceeded 99 percent.

\*A loss ratio is the percentage of each premium dollar an insurer spends on claims.

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Last updated 3-3-10

## **Insurance Credit-Based Insurance Scoring Studies**

### **2009 St. Ambrose University, Iowa**

St. Ambrose University studied Iowa consumers' perspective of the use of credit-based insurance scores by the insurance industry. The report concluded that while Iowans believe that the use of credit based insurance scores to set rates is unfair, that perception is incorrect. The university study also found that there is no evidence within the study to suggest that the minority population of Iowa is disproportionately subjected to adverse actions based on the use of credit-based insurance scoring.

### **2007 U.S. Federal Trade Commission Report to Congress**

This study found that credit-based insurance scores are effective predictors of risk under automobile policies. They are predictive of the number of claims consumers file and the total cost of those claims. The use of scores is therefore likely to make the price of insurance better match the risk of loss posed by the consumer. Thus, on average, higher-risk consumers will pay higher premiums and lower-risk consumers will pay lower premiums. Credit-based insurance scores appear to have little effect as a "proxy" for membership in racial and ethnic groups in decisions related to insurance. The relationship between scores and claims risk remains strong when controls for race, ethnicity, and neighborhood income are included in statistical models of risk.

### **2004-5 Texas Department of Insurance**

Found that by using credit scoring, insurers can better classify and rate risk based on differences in claim experience. This study analyzed random sample of claim records totaling 2 million vehicle years and more than 600,000 house years for homeowners insurance. The major findings of this study are: 1) there is a strong correlation between credit scoring and risk; 2) certain age, income and race groups tended to have worse credit scores, though not all minorities have bad credit scores; and 3) credit scoring significantly improves pricing accuracy when combined with other rating variables in predicting risk.

### **2003 EPIC Actuaries, LCC**

Found an unquestionable connection between insurance scores and likelihood for loss. This study analyzed random sample of claim records totaling 2.7 million earned car years from all 50 states for a period from 7/1/00 through 6/30/01. The major findings of this study are: 1) insurance scores were found to be correlated with propensity of loss (primarily due to frequency); 2) insurance scores significantly increase accuracy of the risk assessment process, even after fully accounting for interrelationships with other variables; 3) insurance scores are among the three most important risk factors for each of the coverage types studied; and 4) study results apply generally to all states and regions.